DOCUMENT RESUME

ED 405 546 CS 012 724

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TITLE Struggling Readers: An Action Research Project.
PUB DATE May 96
NOTE 34p.; In partial fulfillment of requirements for Associate Year.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Action Research; Case Studies; Elementary Education; Learning Strategies; *Metacognition; Program Design; Reading Ability; *Reading Difficulties; Reading Improvement; *Reading Instruction; Teaching Methods; Testing; Tutoring
IDENTIFIERS Reading Recovery Projects; *Scaffolding

ABSTRACT

A study focused on designing and implementing a reading program based on modified Reading Recovery programs. The student selected to be worked with made excellent gains and was the second strongest reader of all students observed in the study. Without question, the student functioned at a level equal to the middle of the class and her learning rate had been accelerated. Results indicated that thoughtful interventions make a difference. Scaffolding strategies included metacognition, appropriate difficulty level, and shared reading with support being gradually decreased. Metacognition helped catch confusions or learning needs early and helped eliminate the need to unlearn or untangle incorrect generalizations. Two student behaviors that signaled a need for metacognition were when a new desired reading behavior was displayed or when the student self-corrected. The aim was to optimize learning time by maintaining a tension that fluctuated between an achievable challenge and a return to a comfortable, easy level. The greater the amount of time spent working with the student, the more progress was made. The researcher noticed that gains seemed to build more quickly when sessions were closer together. Findings support the following assertions: (1) planning must include both short and long term considerations and be based on the on-going performance of the student; and (2) critical elements of the lesson may change at different stages for different students. (Contains seven tables of data; eight appendixes of research materials are attached.) (TB)

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ED 405 546

Struggling Readers

An Action Research Project

**In Partial Fulfillment of
Requirements for
Associate Year**

By Margaret Scordias
May, 1996

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Struggling Readers

By: Margaret Scordias

This action research began prior to the actual project, in the germs of discord, questions, and passions. One of my passions is literacy, especially reading. I find myself devouring professional literature on the topic, tuning into discussions of literacy by colleagues, and accepting challenges to help specific learners. Another of my passions is learning. Over the years, I've wrestled with questions of how we learn, why we learn, and why some learn better than others. These two interests create interwoven strands providing the foci for this research: how I learn and what reading strategies are successful for supporting struggling readers. While either could be isolated, the effects of one upon the other cannot be ignored. I've tried to make explicit my reflections on how I make professional decisions while carefully investigating teaching strategies in the area of reading.

Identification and Description of Problem

In the quest to find exemplary reading programs for struggling readers, the Literacy Committee was referred to sites implementing Reading Recovery type programs. Having read about Reading Recovery, the researcher was less familiar with programs that modified the approach. She believed that Reading Recovery uses excellent strategies, but its rigidity makes it inapplicable to many situations. The researcher wondered whether these Reading Recovery type programs were really different from Reading Recovery or traditional remedial programs.

A site visit to Tempe, Arizona gave the researcher insight into this issue, inspired her to find out more and sparked the desire to try the approach herself. The overarching question became could the researcher design and implement such a program and would it be as effective. However, the researcher quickly discovered that each step she planned exposed other questions and issues.

Lesson Design

The first consideration was whether the researcher could design the program. How was she to develop the program since she lacked training in Reading Recovery methodology and its lesson design? The researcher began with what was available; through reflection she excavated her knowledge and experiences gained as a reading

specialist. Substantial notes from observations taken during the site visit to Tempe were analyzed and used to formulate an outline of the critical components in their lessons. The researcher obtained additional information from three sources; materials from other sites that had developed Reading Recovery type programs; a video of a Reading Recovery lesson; and, two books by Marie Clay, An Observation Survey of Early Literacy Achievement and Reading Recovery: A Guidebook for Teachers in Training. After each the researcher asked herself, "What in this source validates the critical elements previously identified, what could not be incorporated into the lesson design, and what function do these additional items serve?" Using this strategy, the researcher refined the lesson design several times resulting in the identification of nine critical components: Homework at the beginning and end, Warm-up, Running Record, Rereading, Letter/sound Work, Word Work, Sentence Work, Journal, and New Book. (Appendix 1)

Identification of Target Population

This intervention necessitated the selection of students from a first grade classroom, but which class? The researcher strongly agreed with the philosophy that students make the most gains when individual support is congruent with classroom practice. Classroom practices would not be changing during this study. Therefore, the researcher identified the classroom whose current daily practice was most similar to strategies used by researcher in the anticipated intervention. The teacher of this class agreed to support the research process and was interested in all aspects of it.

The next question was how to select the individual students. The researcher wanted two students to observe whether the program was as effective with different students and to more carefully discriminate changes needed in lesson design. Believing that teachers know their students best, the researcher decided to use rank order determined by the classroom teacher's observations as the primary method of identification. After the classroom teacher ranked the students, she and the researcher discussed the criteria she used. The desirability of a screening device was noted.

Another question emerged related to identification: Would screenings described in professional literature identify the same students as the students identified by the teacher's rank order? The teacher and the researcher decided to screen the entire class and select the students from the bottom third of the class as described in the professional literature. They used the tasks described in An Observation Survey: Of Early Literacy Achievement: word identification, alphabet recognition and the

association of a letter with a sound or word, concepts about print, writing vocabulary, hearing and recording sounds in words, and written language sample. (Appendix 2) Although most of the same tests were used, some modifications were made to make the screening tasks less extraneous to daily classroom routines. (Appendix 2) The classroom teacher found the screening information helpful in conducting the classroom literacy program and used the information during fall parent-teacher conferences. (Screening occurred just before conferences.)

The researcher noted that Reading Recovery scoring for alphabet identification did not discriminate students well and may have distorted overall ability. Rankings were redetermined when alphabet scoring was modified to include a combined total of scores from the alphabet related tasks. Using these rankings and looking at students falling into each third, the screening results were almost identical to the ranking determined by the classroom teacher; six of the seven students the teacher identified as being the strongest in literacy and six of the seven students the teacher identified as being weakest fell within the same third, (strongest, middle, or weakest) on the screenings. In fact, six were the same rank and eight exchanged places. The middle third showed the greatest variation in ranking between the teacher's ranking and the one based upon the screening.

In discussing which students should be selected, the teacher felt that although she ranked Student A higher than some others, this student was actually struggling more with putting things together and knowing what it means to read. Out of the bottom third, three students were diagnosed as having a disability and were not considered for the one-to-one interventions. Of the four remaining students, the researcher selected the top student (Student A) and bottom student (Student B) from the bottom third. With the ranking of first representing the weakest reader, the selected students ranked third and sixth according to the screening tasks; second and tenth according to teacher ranking. (See Table 1.)

Student A was a six-year-old Caucasian female first grader. Her family resided in Clayton. Her third grade brother is making expected progress in third grade. Initial text readings by Student A indicated that she lacked word-by-word one-to-one matching and was unable to predict based upon grapho-phonic cues. Her use of picture cues was limited. She primarily relied on memory as an aid in decoding. Screening tasks indicated that she did not know the difference between words and letters and had almost no sound/letter correspondence for encoding.

Student B was a six and one half year old African American first grader. Her family, which resides in Clayton, includes a twin. She and her twin were struggling in first grade. Initial text reading indicated that she used picture cues and made up corresponding stories. Her oral language was strong, using descriptive words as well as complex sentences. Her encoding and word recognition skills were almost nonexistent.

To determine whether progress was accelerated with students moving closer to the median of the class, a control population had to be determined. This population was identified as those students, who according to the screening, held the medial position and the students who ranked immediately before and after the medial student. With a class of twenty-one students, the control population for the middle of the class held the tenth, eleventh, and twelfth positions according to the screening. According to teacher ranking, they held the eleventh, twelfth, and eighth positions. This population is identified as Control C, Control D, and Control E. (See Table 1.)

The students both above and below Students A and B were identified to provide information about whether their progress was greater than that of peers performing at a similar level. This population was the rest of the students in the lower third and one student from the middle third; rankings of fourth, fifth, and eighth according to the screening, rankings of fourth, sixth and seventh according to the teacher rankings. These students are referred to as Control F, Control G, and Control H. Control F was in the middle third because she was the one above Student A who was the top of the bottom third. (See Table 1.)

Table 1
Comparison of Identified Population

	Class Third	Screening Ranking	Teacher Ranking
Student A	**Lower**	**6**	**10**
Student B	**Lower**	**3**	**2**
Control C	Middle	12	8
Control D	Middle	11	12
Control E	Middle	10	11
Control F	Middle	8	6
Control G	Lower	5	7
Control H	Lower	4	4

* Students in the lower third ranked from 1 to 7.
Students in the middle third ranked from 8 to 14.
Students in the upper third ranked from 15 to 21.

Leveled Materials

The Reading Recovery modified approach required the use of leveled materials. This was a major concern as it appeared that the process used in Reading Recovery to determine the level of books is not published. What materials were to be used and how to level them became the next questions for the researcher to address. A significant number of readily available materials at the beginning levels needed to be identified. The researcher brainstormed places within the school where these materials might be used. Kindergarten had materials and one of these teachers agreed to share these with the researcher.

To create a leveled list, the researcher used knowledge of readability factors to generate a database. It included words per sentence, words per page, lines per page, total number of words, and style. Style was described as frame, repetition, predictable pattern, subject-verb, multiple frames, etc. Later, the researcher was able to obtain a printout from another Reading Recovery type program that also helped with the leveling. However, many of the materials were unavailable. When trade books from the library shelves were used, the researcher had to rely on prior knowledge of readability factors including those described above. The one factor that could be incorporated, but not by itemizing it, was the student's interest in or previous experience with a topic. Being able to use the database made it more efficient to identify appropriate titles for the student's specific needs and/or interests.

Instructional intervention

Time and duration
The researcher intended to individually instruct each student for thirty minutes daily using the previously described lesson design and materials. Student A started two weeks before Student B due to student absence and to the researcher's desire to review and make refinements needed in lesson design. Student A participated in twenty-five sessions between November 1, 1995 and February 28, 1996. Student B participated in 11 session between November 13, 1995 and December 12, 1996. Sessions with Student B were discontinued because the student moved to another school district.

Lesson considerations
Originally, the researcher used all components in the order that they are listed in Appendix 1. In working with her students, the researcher discovered that Warm Up was only useful through level three. Since rereading was a part of Homework and Running Record, additional rereading was not always necessary. However, it was critical when students moved up a level or after long breaks in

sessions. By level four, Letter/Sound Work was more natural when incorporated into Word Work or Journal. After level five, the researcher began using lengthier materials that resulted in completing part of the lesson design one day and part the second day. Every session included Running Record and Homework.

The researcher consciously monitored her interactions with the student to ensure regular student metacognition related to reading. The researcher's teaching experiences caused her to hypothesize that metacognition is most productive at critical points. These teachable moments are the optimum time to teach a strategy. The researcher predicted that responding with a metacognitive prompt to two specific student actions would be productive: when the student displayed a new desired reading behavior or when the student self-corrected. For Student A some examples of new desired reading behaviors included pointing to words, following the print with her eyes, previewing a book before reading, and asking questions about the text.

Initially, the student was unable to respond to any of the metacognitive prompts. The researcher began to model and talk aloud about specific reading processes. For example, the researcher stated, "I wonder what this page is about. There is a picture of a frog on it. The rest of the book names animals and tells the sound the animal makes. I wonder if the word ribbit is on this page." Next, the researcher asked herself a question and scaffolded Subject A verbalizing the reading process by drawing her into the dialog. To move to this level, the above discussion was followed by asking Student A, "Do you ever look at a picture and think about what words might be on the page before you read it? Can you remember a time when you did this? When we turn to the next page, I'd like you to try to figure out a word that might be on that page." After this, the student decided what word might be on the page. Prior to reading the page, the researcher asked Student A why she thinks it will be on the page.

When Subject A learned the metacognitive process of discussing reading strategies, the researcher used several open-ended prompts including:

> How are you going to remember that word?
> How did you know to (state specifically what student did)?
> Did you know at first, you said _____ and then changed it to _____? How did you know to change that word?
> Why did you _____? (ex., turn the book around)

Lessons were conducted during the researcher's planning period. Frequently, other demands were placed upon this planning period. Therefore, it was impossible to meet the daily commitment. Initially, students were seen three to five times a week. During the last six weeks this lessened to one to two times per week for

30 to 45 minutes. When lengthier materials were introduced, it was more productive to spend a longer time within a lesson. This allowed the student to have sufficient meaningful context.

The anecdotal records were compiled daily with sufficient standardization to allow the researcher to record the instructional decisions made during the lesson and to review student performance. These records became the point from which the next days lessons were planned. To ensure that this planning not be haphazard or short sighted, the researcher reviewed the lesson annotations and student journals at the end of every six lessons. From this reflection, the broad foci for the next six lessons were determined. Therefore, the daily lessons supported each other as they focused on specific aspects of current broader foci.

How early the students' skills could be transferred to more common trade books was addressed by the researcher. As Subject A started to develop fluency, confidence, and a sight vocabulary, the researcher began to incorporate books from the library shelves. As Subject A moved out of level 3h, the researcher began to incorporate trade books that were lengthier than the texts previously used. To ease this transition, Student A and the researcher would share the responsibility for reading the text; sometimes they alternated reading, sometimes the researcher read more challenging portions while the student read other portions, sometimes they read portions chorally. Always the shared readings were followed by the student reading it individually. The researcher noted lengthier and more involved discussion when reading these materials. More challenging materials were balanced with materials where fluency was immediate.

The researcher videotaped the last two lessons. These lessons were at the challenge level. An analysis of these tapes confirmed the use of metacognition, shared reading, and rereading as successful strategies for supporting struggling readers.

On-going Assessment

Daily anecdotal records maintained by the researcher served as the primary strategy for on-going assessment. A copy of the form used is in Appendix 3. A sample of a completed one is in Appendix 4. A graph of text, their levels, and Student A's success rate was added to daily. (Appendix 5).

Student A had consistent home support. She always returned her materials at the beginning of each day and talked about whom she had read to and what they said. Student B received inconsistent support, frequently not returning her materials or stating that she hadn't read the book or done the sentence puzzle.

Reflections by the researcher and conversations with the classroom teacher ensured on-going assessment considered both the individual student's performance and the performance of the rest of the class. During the first three to four weeks, the researcher and classroom teacher conferred almost daily. Later, they met every one to two weeks, sharing information about the selected students and strategies. This developed a strong collaborative relationship facilitating the inclusion of various classroom literacy topics in the discussion. One example was book baskets that the researcher helped to organize.

Although the researcher designed a method for on-going assessment at the end of each journal, she was unable to put it into practice because there were an insufficient number of lessons. A journal was completed about every six lessons. The plan assessed word writing after journals 1, 4, 7, 10, and 13; sounds and alphabet skills after journals 2, 5, 8, 11, and 14; and word recognition after journals 3, 6, 12, and 15. The assessment cycle was completed for journals 1, 2, and 3. Based upon this sample experience with systematic assessment, the plan would have worked very efficiently if it had been fully implemented. These on-going reflection assessments are included in Appendix 6 and 7.

Summative assessment

Pre- and post-intervention assessment results were divided into four groups according to the scoring and norm information available; criterion based, holistically scored, assessments for which stanines are available, and grade level performance. A description of these tests is included in Appendix 2.

No summative data was obtained for Student B or Control H because they moved prior to the end of the intervention period. However, a look at the researcher's reflection for Student B indicated a very positive beginning. (Appendix 7). The first eight lessons were conducted within two weeks. After eight sessions, Student B was able to read ten words from the Ekwall Basic Sight Word List when she had read zero previously. She also added ten new words to the thirteen words she could previously write from memory. This was a significant acceleration of her previous rate of learning.

Using criteria based, informal tests, students demonstrated their mastery on each of four skills related to reading; sight word vocabulary, alphabet recognition, the ability to make the sound for particular letters, and the ability to name a word that begins with each letter. Table 2 lists the percentages of criteria mastered for each assessment.

Student A had the highest percentage of sight words mastered although the difference was not statistically significant in some cases. If ninety percent is considered mastery, Student A achieved mastery in all four of these areas. According to these assessments, Student A performed as well as or better than the middle level controls. Only one score in this area was better than Student A's; Control G's score on Letter/Sound Association was higher, but not significantly.

Table 2
Post-intervention Assessments of
Reading Skills Reported by Percent Mastered

		Student A	Control C Middle Third	Control D Middle Third	Control E Middle Third	Control F Middle Third	Control G Same Third
Ekwall Sight Words Preprimer	Post	**97**	95	95	77	65	88
Alphabet Recognition	Post	**100**	100	100	100	100	100
Letter / Sound	Post	**92**	100	77	92	81	96
Letter & Key Word	Post	**100**	96	96	92	84	96

Assessment of three different aspects of written language were holistically scored based upon a rubric with one to six levels. Levels one through four were considered unsatisfactory performance. Levels five and six were satisfactory. Student A scored as well as others from the middle group.

A look at the pre- and post-intervention writing samples illustrate Student A's growth in this area. Below is a transcription of the three samples taken for pre-intervention assessment and the one taken for post-intervention assessment.

10/24/95
I Lrc Kas ic Cis Bes I Lcas Bes the rus
(I like cats because they are soft.)

10/25/95
My NoLe is _____ is haf banis And is hfa samab And yin Lik uaira is Paa yin yaoic hon My in cite Hne in th nf Hsn fax
(My name is _____ has brown eyes and has a salamander and ????????? him out of his fish tank) ???? means she could not remember what she had written.

10/26/95

I haif a salrmra etn snfa a sri yen
(I have a salamander. It is small and I like to come home and play with him.)

2/20/95
I like to go to the golareoa it is fun becazs I like the golareoa I get to have pizsza and it is good and I get clows and I like the clows that my mom gets me and my fauit clows are flawrd drroases and I get my drroases at the golareoa
(I like to go to the Galleria. It is fun because I like the Galleria. I get to have pizza and it is good. And I get clothes. And I like the clothes that my mom gets me. And my favorite clothes are flowered dresses and I get my dresses at the Galleria.)

Table 3
Post-intervention Assessment of
Written Language

		Student A	Control C Middle Third	Control D Middle Third	Control E Middle Third	Control F Middle Third	Control G Same Third
Linguistic Organization	Post	**5**	5	5	5	5	5
Message Quality	Post	**6**	6	6	6	5	4
Directional principles	Post	**6**	6	6	6	6	6

Table 4 contains the stanines for assessments that have national norms. The Concepts of Print score was only obtained for pre-intervention and is thus not included in this table. Student A scored as well or better than the controls on three assessments; Alphabet using Reading Recovery scoring, Hearing Sounds in Words, and the WRAT Word Recognition Subtest. Control E and Control F, in the middle third and lower third respectively, earned higher scores for Writing Vocabulary.

Table 4
Post-intervention Assessments of
Reading Skills Reported By Stanines

		Student	Control	Control	Control	Control	Control

		A	C Middle Third	D Middle Third	E Middle Third	F Middle Third	G Same Third
Alphabet Reading Recovery Score		8-9	8-9	6-7	5	4	6-7
Concepts About Print	Post						
Writing Vocabulary	Post	5	5	4	6	7	4
Hearing Sounds in Words	Post	9	3	8	9	6	7
WRAT Word Recognition Subtest	Post	6	4	5	4	3	6

The Informal Reading Inventory is grade level normed. On this subtest, Subject A scored at grade level and at a higher grade level than four of the controls.

On the first grade passage, Student A's word recognition scores were within the instructional range. She had difficulty with one vocabulary question that was the result of a mispronounced word and with two inference questions. Control F and G had difficulty with both word recognition and comprehension of the passage at the preprimer level. On the preprimer passage, Control E was within the instructional range for word recognition, but not for comprehension. Control C was within the instructional range for both word recognition and comprehension of the preprimer passage, but was at the frustration level for both on the primer passage. Although Control D did not score within the frustration level on the third grade passage, his restless behavior indicated that it was very difficult.

The word goat in the preprimer passage provided insight into each student's method of determining unfamiliar words in context. Subject A began the passage and pronounced goat as "gert", paused, said that it didn't make sense, thought for a minute, and then corrected it to "goat". Control C pronounced goat as "gate" for three occurrences. On the third, he self-corrected and got the next three correct. For goats, he said, "gets" but self-corrected by repeating after he got to the end of the sentence. Control D and Control E pronounced goat correctly and without hesitation even on the first occurrence. Control F made three attempts to pronounce goat when first encountered; got, goat, and good. She settled on "good", but called it "got" the next time it occurred and skipped it the next two times. I pronounced the

word for her on its fourth occurrence. She correctly pronounced the word the last two times. Control G pronounced goat as "cat" the first four times he encountered it. He made no self-corrections. The last three times goat appeared, it was read as "got" even in the sentence "Not a goat!". He read this sentence as "Not a got!' and didn't self-correct. Control A and C used grapho-phonic, semantic, and syntactic cues. Control F and G relied exclusively on grapho-phonic cues. The database of words from the texts that Student A read with the researcher was checked to ensure that the word goat was not included in any texts used in the lessons. It was not. Most impressive on this subtest was the ease with which Subject A read the passages. She read fluently, with expression, and exhibited appropriate self-correcting behaviors.

Table 5
Post-intervention Assessment of
Passage Reading

		Student A	Control C Middle Third	Control D Middle Third	Control E Middle Third	Control F Middle Third	Control G Same Third
IRI Instructional Level	Post	**Primer**	Pre-primer	Second +	Pre-primer	(Not yet) Pre-primer	(Not yet) Pre-primer

In reviewing pre-interventions results with post-intervention, Student A received the lowest score of all participants in the areas of Linguistic Organization and Directional Principles. She tied with Control G at scoring the lowest on the Concepts of Print.

Using Table 6, the amount of gains each student made can be determined. Control G made the greatest gains on five of the individual assessments; Ekwall Sight Words, Letter/Sound, Letter & Key Word, Message Quality, and Alphabet Reading Recovery Scored. Student A made the most gains in Linguistic Organization, Directional Principles, and Hearing Sounds in Words. Control E made the most gains in Alphabet Recognition and Writing Vocabulary. Overall, Control G made the greatest gains on the individual assessments. However, his application of those skills to accurately read passages was weak as demonstrated with the IRI.

Table 6
Pre- and Post-intervention Assessments
Compiled Results

		Student	Control	Control	Control	Control	Control

		A	C Middle Third	D Middle Third	E Middle Third	F Middle Third	G Lower Third
Ekwall Sight Words Preprimer	Post	**97%**	95%	95%	77%	65%	88%
	Pre	*19%*	*28%*	*32%*	*21%*	*9%*	*0%*
Alphabet Recognition	Post	**100%**	100%	100%	100%	100%	100%
	Pre	*96%*	*96%*	*98%*	*91%*	*94%*	*94%*
Letter / Sound	Post	**92%**	100%	77%	92%	81%	96%
	Pre	*58%*	*76%*	*65%*	*69%*	*42%*	*31%*
Letter & Key Word	Post	**100%**	96%	96%	92%	84%	96%
	Pre	*77%*	*92%*	*65%*	*80%*	*50%*	*50%*
Language Linguistic Organization	Post	**5**	5	5	5	5	5
	Pre	*1+*	*5*	*5*	*5*	*4*	*2*
Message Quality	Post	**6**	6	6	6	5	4
	Pre	*5*	*5*	*6*	*6*	*5*	*2*
Directional Principles	Post	**6**	6	6	6	6	6
	Pre	*4*	*5*	*6*	*5*	*4+*	*4*
Alphabet Reading Recovery Scoring		**Stanine**	Stanine	Stanine	Stanine	Stanine	Stanine
	Post	**8-9**	8-9	6-7	5	4	6-7
	Pre	*6-7*	6-7	*6-7*	*4*	*4*	*4*
Concepts About Print		Stanine	Stanine	Stanine	Stanine	Stanine	Stanine
	Pre	*4*	*8*	*6*	*6*	*6*	*4*
Writing Vocabulary		**Stanine**	Stanine	Stanine	Stanine	Stanine	Stanine
	Post	**5**	5	4	6	7	4
	Pre	*3*	*5*	*4*	*3*	*5*	*2*
Hearing Sounds in Words		**Stanine**	Stanine	Stanine	Stanine	Stanine	Stanine
	Post	**9**	3	8	9	6	7
	Pre	*5*	*5*	*5*	*8*	*4*	*4*
WRAT - Word Recognition		**Stanine**	Stanine	Stanine	Stanine	Stanine	Stanine
	Post	**6**	4	5	4	3	6
IRI - Instructional Level	Post	**Primer**	Pre-primer	Second	Pre-primer	(Not yet) Pre-primer	(Not yet) Pre-primer

* To understand scoring and norms, it may be helpful to refer back to previous explanations.

Students received differing amounts of literacy support beyond the classroom. (Table 7). For those who received additional support the major differences included time, who gave it, and the type of instruction provided. Control G received the most additional support, more than doubling the amount others received. This support was provided by a grade level assistant and focused on grapho-phonic issues. He also received regular support from the parents at home. This support was coordinated with the school program as the parents and classroom teacher met frequently. Student A received the most support from the researcher, a certified reading specialist emphasizing an integrated language approach; skills were selected and taught in the context of text reading. She also received some support from

an Oasis volunteer using a method most similar to lap reading. Control C received support from an Oasis volunteer using a method most similar to lap reading. Controls D, E, and F did not receive support apart from the classroom.

When compared with the amount of gains made, it appears that Control G who received the most amount of support made the most gains on individual word recognition and alphabet related skills. This parallels the focus of his support. Student A made the most gains on language and encoding tasks. She also achieved the second highest score on actual reading while Control G tied for the lowest.

Table 7
Comparison of Support Received

	Class Third	Literacy Support in Addition to Classroom	Amount	Source & Type
Student A	**Lower**	**Yes**	**25 lessons totaling 14 3/4 hrs. & 30 min./week totaling 5 hrs.**	**Researcher Integrated Language Oasis volunteer Lap Reading**
Control C	Middle	Yes	30 min./week totaling 5 hrs.	Oasis volunteer Lap Reading
Control D	Middle	No		
Control E	Middle	No		
Control F	Middle	No		
Control G	Lower	Yes	30 min./day totaling 35 hrs.	Grade Level Assistant Grapho-phonic

Discussion

This study was limited due to its population size and the difficulties that always occur in action research. However, it strongly supported that even within the typical conditions of a school, thoughtful interventions made a difference. With the number of students diagnosed as handicapped and the two students who moved, the comparison group at the same level, lower third, was not as large as designed or desirable. When Student B left, the researcher lost the opportunity to make a comparison between the effect of the intervention on students scoring at both the bottom and top of the lower third. However, short-term on-going assessment was very positive for Student B. When Control H from the lower third moved, only one qualifying student from the lower third remained for comparison purposes. While this caused difficulty for the study, moving into or out of a first grade

classroom is a fact of our mobile society and reflects how adjustments must be made by the classroom teacher trying to provide quality, appropriate instruction for every child.

To ensure success, scaffolding strategies included metacognition, appropriate difficulty level, and shared reading with support being gradually decreased. Metacognition was an essential strategy. It helped the instructor to catch confusions or learning needs early and to eliminate the need to unlearn or untangle incorrect generalizations. Two student behaviors that signaled the need for metacognition were when a new desired reading behavior was displayed or when the student self-corrected.

In this study, the person who provided the support made a difference. Greater professional training and experience allowed for greater flexibility resulting in high quality, effective lessons. Greater professional knowledge helped the researcher address issues that occurred. The need to constantly reflect upon and adjust difficulty level was the most constant professional demand.

The aim was to optimize learning time by maintaining a tension that fluctuated between an achievable challenge and a return to a comfortable, easy level. The lack of sufficient reading materials at appropriate levels and the researcher's desire to use a greater variety of reading materials resulted in the use of trade books found in the library. It is felt that this was a significant modification that pushed the student and accelerated her confidence as a reader. Shortly afterwards, Student A's class was in the library. She was observed pulling a book from the shelf and walking around the room reading it. She read it over and over.

The greater the amount of time spent working with the student, the more progress was made. The researcher noted that gains seemed to build more quickly when sessions were closer together. When sessions were further apart time had to be spent in additional rereading. The researcher felt that the potential to accelerate the learning rate was greater when interventions were consistent. Ideally sessions would have been daily. This was not possible because it was not the researcher's primary responsibility.

Components within the lesson design were more flexible than the researcher originally thought. As the students progressed, different components were emphasized. Although there were times when a component was incorporated into another component or omitted, every lesson included Running Record and Homework. The emphasis throughout sessions reflected an integrated language

approach, working with grapho-phonic, semantic, and syntactic aspects within each component. This and extensive time reading were critical to transferring the learning to new texts and to promoting self-confidence and independence.

The researcher conducted the assessments in the same way that most assessments are conducted in schools; finding a corner at whatever time both the student and instructor were available. While not ideal in terms of research, these conditions are realistic. The researcher felt that the Pre-intervention assessments were effective at identifying appropriate students and were very similar to the teacher's rating. The modifications made to make the assessments less intrusive to the classroom did not appear to alter their effectiveness for student selection. With the modifications made in the scoring of the alphabet skills, these assessments effectively identified students needing support. The Post-intervention assessments were also appropriate. The researcher felt that the most important assessment was the Informal Reading Inventory as it assessed the reading act within a whole text.

Conclusions

The researcher was able to design and implement a reading program based on modified Reading Recovery programs. The student that the researcher worked with made excellent gains and was the second strongest reader of all students observed in the study. Without question, Student A functioned at a level equal to the middle of the class and her learning rate had been accelerated.

Issues raised in the discussion section support the following:

- Highly trained professionals provide the greatest support within the shortest time and have the greatest knowledge for making on the spot instructional decisions. This professional needs to have the job of providing support as their primary responsibility if the most consistency is to be achieved.
- The intervention must include metacognitive strategies, consideration of difficulty level, and shared reading.
- The intervention should be consistent and daily to optimize gains.
- Planning must include both short and long term considerations and be based upon the on-going performance of the student.
- Critical elements of the lesson may change at different stages and for different students. Actual reading and writing must comprise the greatest proportion of the time to make the most positive impact learning and student progress in the areas of reading and writing.
- Learning should be optimized by maintaining a tension that fluctuated between an achievable challenge and a return to a

comfortable, easy level. Varied materials at multiple levels must be readily available to facilitate this approach.

Recommendations or actions to be taken as a result of your study

The researcher recommends that a similar program be developed and used with our struggling readers in first grade. The development of a leveling rubric and extension of the database are critical to the success of this project. As data is gathered from future interventions, it should be integrated with the data from this study and used to refine the work we do.

As the researcher conducted this study, she observed herself and tried to metacognate her learning process. She noted that she tends to learn very independently. She preferred to absorb lots of information before analyzing it herself. After formulating her own hypothesis, she enjoyed exploring the situation, the possibilities, and the decisions with others. Talking aloud and sharing not only helped her reexamine her process and decisions, but also provided motivation when moving to another level. She frequently resisted formalizing any hypothesis too early, waiting for patterns to emerge naturally. Even though she considers her opinions valid, she seeks ways of confirming them.

Appendix 1

Lesson Design Critical Components

The basic lesson design included the following critical components. Initially, the components were completed in the order described below. Later, they were used in a more natural, fluid order. Each lesson began and ended with a school-home connection that the researcher called homework.

Homework -

The researcher collected the materials the student had taken home at the end of the previous lesson. The instructor and the student discussed what she did at home with the materials. The student chose one of the things she had brought back to do with the researcher.

Warm-up -

This component was used most frequently during levels one to three. Warm-up was a routine that focused on a skill that has been introduced, but with which the student needed to develop automaticity. Examples of the routines used included pointing to and naming letters of the alphabet and reviewing phonograms.

Running Record -

This system provided a method for recording the reading work of the child as she puzzled out a text previously introduced. It helped reveal some of the process that the student used to monitor and correct her reading. From this record, the teacher made informed determinations about the appropriateness of the difficulty level and upcoming instruction for this particular student.

Rereading -

In this component, one or more texts were reread each session. At times, the student's journals were included as texts to be reread. This component helped build fluency based upon what the child could already do. This component also supported the student in processing within a continuous text. It improved both the efficiency and effectiveness with which the student used reading strategies.

Letter/Sound Work -

A variety of strategies both within text and in isolation are employed to learn to identify letters. Sounds are frequently highlighted in working with phonograms or building words with magnetic letters.

Word Work -

This component used magnetic letter to make and break words into letters or word parts. Typically, the word was selected from the running record or rereading as one because it presented difficulty or because it was one that can be useful in building a larger vocabulary base.

Journal -

The student wrote a sentence or more in response to something of their choice from that day. It focused on encoding words. The top part of the page was used to help the student with the words. Sound boxes were very helpful. A variety of manipulatives was used for the sound boxes. Later, lines were used for the sounds and no box was needed.

Sentence Work -

This component began with a sentence from the journal for the day or from one of the readings. This sentence was cut into parts depending upon the needs of the child. After the parts were mixed up, the child put the sentence back together.

New Book -

The student was introduced to a new text each day. The first time the student read it, she was given time for processing and supported as needed. After the reading, the teacher selected aspects for discussion. A second reading occurred. Many times, it included both the teacher and student reading chorally.

Homework -

Books were sent for homework only after the student had completed a successful running record for it or if it was a book at the easy level. One or more books each day were sent home along with the sentence puzzle for the day.

Originally, the researcher used all components in the order that they are listed in Appendix 1. In working with her students, the

researcher discovered that Warm Up was only useful through level three. Since rereading was a part of Homework and Running Record, additional rereading was not always necessary. However, it was critical when students moved up a level or after long breaks in sessions. By level four, Letter/Sound Work was more natural when incorporated into Word Work or Journal. After level five, the researcher began using lengthier materials that resulted in completing part of the lesson design one day and part the second day. Every session included Running Record and Homework.

Appendix 2

Assessment Components

Ekwall Basic Sight Word List -

An Observational Survey of Early Literacy Achievement by Marie M. Clay includes some word lists. However it also points out that any test of first year instruction must be closely linked to the instruction. Therefore, the most frequently occurring words from the instructional materials should be used. The classroom teacher was using the Ekwall Reading Inventory as a measure of student progress in word recognition. Therefore, the researcher continued with this instrument to avoid adding another assessment.

The Ekwall Reading Inventory (1986) is an informal reading inventory that measures students' oral and silent reading levels. It includes inventories for specific skills, one of which is basic sight vocabulary. It is divided into grade level lists. We administered the fifty-seven words that comprise the preprimer list. Although the manual recommends scoring only those recognized with less than one second delay as being correct, the examiner did not follow these recommendations and scored all items as correct that were pronounced correctly.

Letter Identification -

In Reading Recovery assessment, the student is randomly asked to do two of three tasks related to alphabet knowledge; name the letters of the alphabet, make the sound for a letter of the alphabet, or to state a word that begins with that letter. In our study, students were asked to give all three types of information for each letter of the alphabet.

Concepts About Print -

This assessment provides information about what the child knows about written languages. Some of the specifics assessed include the front of the book, differentiating print from picture, directionality, word-by-work matching, first and last, top and bottom, page order, letter order, word order, meaning of some punctuation marks, and differentiating letters from words.

Writing Vocabulary -

The child is asked to write as many words as she knows in a ten minute time period. The score is obtained by counting how many words are correctly spelled.

Hearing and Recording Sounds in Words (Dictation Task) -

The child is asked to write a sentence dictated by the researcher. This task permits the observation of the student's ability to hear sounds in words and associate them with a written representation. Every sound that has a correct phoneme association is scored as one point.

Written Language Samples -

Three samples of writing are analyzed in terms of language level, message quality, and directionality. This assessment provides another way to examine a student's concepts about print as well as written language abilities.

WRAT3 (Word Recognition Subtest) -

This task expects students to read a list of progressively more difficult words. It provides norms for interpreting how the student compares with others of the same age throughout the nation.

IRI (Informal Reading Assessment, Oral Reading and Comprehension)

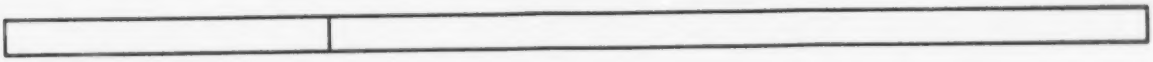
This assessment developed by Burns and Roe consists of four sets of increasingly more difficult grade level passages. While there are several ways to use these passages in assessment, students in this study orally read passages to determine instructional level. A discussion and/or comprehension check followed.

Appendix 3

Daily Lesson Form

Name _____ Date _____

Lesson Component	
Homework	
Warm Up	
Running Record	
Rereading	
Letter/Sound Work	
Word Work	
Sentence Work	
Journal	
New Book	
Homework	



Appendix 4

Sample Completed Lesson Form

Name _____ **Date** 12/8/95

Lesson Component	
Homework Copycat	Great! First time visual pointing not with finger. things/stuff/sc on/one/out
Warm Up	----------
Running Record Tree House	
Rereading Copycat	
Letter/Sound Work	
Word Work	went sent tent
Journal	The frog went to get the fly.
Sentence Work Emphasis - blends & spaces	The/ /fr/og/ /went/ /to/ /get/ /the/ /fl/y.
New Book Little Pig	butcher home sausages will
Homework Tree House Sentence puzzle	

Appendix 5

Book Record

DATE	TITLE	LEVEL	PERCENTAGE
March	Seven Blind Mice		
2/20	Four Good Friends	6m	99
2/7	What a Dog	6m	100
1/25	What a Dog	6m	92
1/23	Storm	3m	100
1/22	Mouse	3h	100
1/20	Mouse	3h	96
12/12	Little Pig	3m	94
12/12	No, No	3m	100
12/8	Tree House	2	94
12/7	Monster Sandwich	2	96
12/6	In the Mirror	3m	95
12/5	Nests	2	100
12/1	No, No	3m	100
11/29	Big Hill	3h	100
11/29	Come With Me	3m	96
11/28	Bee	3m	92
11/22	Brown Bear		
11/20	Nighttime	3m	97
11/20	Plop	3m	96
11/13	Who's Going to Lick the Bowl	2	100
11/10	Plop	3m	96
11/6	Dark Dark Woods (adaptation)	3h	87
11/6	Ghost	2	93
11/1	Ghost	2	82
10/31	Dark, Dark Woods (original ver.)		

Percentage Correct
According to Level

DATE	1	2	3e	3m	3h	4e	4m	4h	5e	5m	5h	6e	6m	6h
March														
2/20													99	
2/7													100	
1/25													92	
1/23				100										
1/22					100									
1/20					96									
12/12				94										
12/8				100										
12/7		94												
12/6		96												
12/5				95										
12/1		100												
11/29				100										
11/29					100									
11/28				96										
11/22				92										
11/20														
11/20				97										
11/20				96										
11/13		100												
11/10				96										
11/6					87									
11/6		93												
11/1		82												
10/31														

Appendix 6

Student A
Journal Entries of Researcher

Initial	Foci - one-to-one, word-to-word matching - focus on print - differences between capitals & lowercase letters - reinforcing letter directionality - use of sound/symbol correspondence for encoding
End of Journal 1	Notes - beginning to use word-by-word matching and print to self-correct - use strategy "get your mouth read" for decoding - intermittent use of initial sounds and pictures for decoding - book level 2 to 3 - developing more complex sentences - doesn't hear sounds in words including initial unless I elongate - can write 11 more words Foci - word-by-word matching - differences between word, letter, sentence - awareness of capitals and lowercase letters - hearing sounds in words to use for encoding - reinforce directionality of letters - use decoding strategies of previewing book, using pictures, and getting mouth ready
End of Journal 2	Notes - word-by-word matching greatly improved; beginning to self-correct - sound check indicates all sounds except o,u.y,g,e,q are known - no directionality issues in this journal period - attitude has changed, wants to read during our time, is thrilled to read to anyone who will listen; observed walking around library reading a book over and over - book level 3M - difficulty with metacognitive strategies Foci (same as above with one addition) - word-by-word matching - differences between word, letter, sentence - awareness of capitals and lowercase letters

	- hearing sounds in words to use for encoding - reinforce directionality of letters - use decoding strategies of previewing book, using pictures, and getting mouth ready - using known words & initial sound substitution as a decoding strategy
End of Journal 3	Notes - inconsistently self-corrects - encodes sounds into letters to monitor for word reversals - is beginning to self-monitor using content, picture cues, and grammatical structure - understands letter, word, sentence and the use of spaces - continues to need support to elongate words - knows when she doesn't know a word and tries it at the top first, place holders help her to be more accurate - book level 3h to 5 Foci - continue to use magnetic letters to reinforce letter order in words - use initial consonant substitution - add try that again to decoding strategies - stress metacognition strategies with self-corrections
End of Journal 4	Discontinued book level 6 to 7

Appendix 7

Student B
Journal Entries of Researcher

Initial	Notes - excellent oral language development - strengths in use of sentence grammar and meaning Foci - word recognition development of a basic sight vocabulary - use of sound/symbol correspondence in encoding - use of language skills for cueing
End of Journal 1	Notes - performance very inconsistent both for reading and writing - is not returning books; is home support adequate - learned 6 new words in four lessons as checked by classroom teacher (from 2 to 8 words) - catches on to unusual ideas quickly; th is stick your tongue out sound - move down to book level 2 Foci - develop awareness of repeated words being the same word - use meaning to help with decoding - emphasize repeated readings - use previewing book and predicting from picture cues as an aid to decoding - repeat what she says when incorrect and ask does that make sense
End of Journal 2	Notes - each time we seem to be making progress, she becomes dysfluent, need to emphasize rereading - writing assessment, wrote ten more words - need more time with oral word play, translated into a print format - book level 2, 3e, 3m Foci - continue to emphasize rereading - developing sight words through rereading and word play - use meaning to help with decoding - use previewing book and predicting from picture cues as an aid to decoding - repeat what she says when incorrect and ask does

	that make sense, what would make sense - add strategy "get your mouth ready" - add strategy "try that again" especially following inconsistent performance
Student left	

Appendix 8

Student A Journal Samples

The items below reflect the child's first entry in each of her journals. What she wrote without assistance is in bold. For the things upon which she needed assistance, the type is plain.

Book 1 - Oct. 31, 1996
Dark box
Dark box

Book 2 - Dec. 5, 1996
A **monster looking at me.**

Book 3 - Jan. 20, 1996
Brown Bear
Brown Bear
What do you see?

Book 4 - Jan. 21, 1996
Stop people said the stopman.

Book 5 - Feb. 20, 1996
Give **me back my beans said the Greech.**